DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	WESTON POND	Lake Area (ha):	5.99
Town:	AMHERST	Maximum depth (m):	4.2
County:	Hillsborough	Mean depth (m):	2.1
River Basin:	Merrimack	Volume (m^3):	124500
Latitude:	42°52'40" N	Relative depth:	1.5
Longitude:	71°35'23" W	Shore configuration:	1.15
Elevation (ft):	235	Areal water load (m/yr):	10.55
Shore length (m):	1000	Flushing rate (yr^{-1}):	5.10
Watershed area (ha):	132.1	P retention coeff.:	0.54
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:		8 February 1994	16 July 1993
DOM. PHYTOPLANKTON (% TOTAL)	#1	MELOSIRA 50%	ASTERIONELLA 45%
	#2	PENNATE DIATOM SPP. 45%	OSCILLATORIA 35%
	#3	(ALL ALGAE SPARSE)	
PHYTOPLANKTON ABUNDANCE (cells/mL)			4100
CHLOROPHYLL-A (µg/L)			35.99
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 45%	KERATELLA 36%
	#2	KELLICOTTIA 22%	NAUPLIUS LARVA 28%
	#3	CALANOID COPEPOD 11%	CILIATE SPP 25%
ROTIFERS/LITER		207	148
MICROCRUSTACEA/LITER		98	104
ZOOPLANKTON ABUNDANCE (#/L)		305	356
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			1.2
BOTTOM DISSOLVED OXYGEN (mg/L)		2.1	0.2
BACTERIA (E. coli, #/100 ml)	#1		< 1
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 2.5
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : 16500

CHEMICAL:

Lake: WESTON POND
Town: AMHERST

	8 February 1994		16 July 1993		
DEPTH (m)	1.0	2.0	1.0		3.0
pH (units)	6.4	6.1	6.8		6.3
A.N.C. (Alkalinity)	8.1	9.2	8.5		7.7
NITRATE NITROGEN	< 0.05	< 0.05	< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN	0.58	0.64	0.54		0.86
TOTAL PHOSPHORUS	0.023	0.031	0.024		0.046
CONDUCTIVITY (μmhos/cm)	95.5	95.0	83.7		79.7
APPARENT COLOR (cpu)	80	75	70		80
MAGNESIUM			0.84		
CALCIUM			3.9		
SODIUM			15.6		
POTASSIUM			1.85		
CHLORIDE	18	17	15		14
SULFATE	6	6	3		4
TN : TP	25	21	23		19
CALCITE SATURATION INDEX			3.0		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	1	6	11	Eutro.

COMMENTS:

1. A.K.A. Little Baboosic Lake.

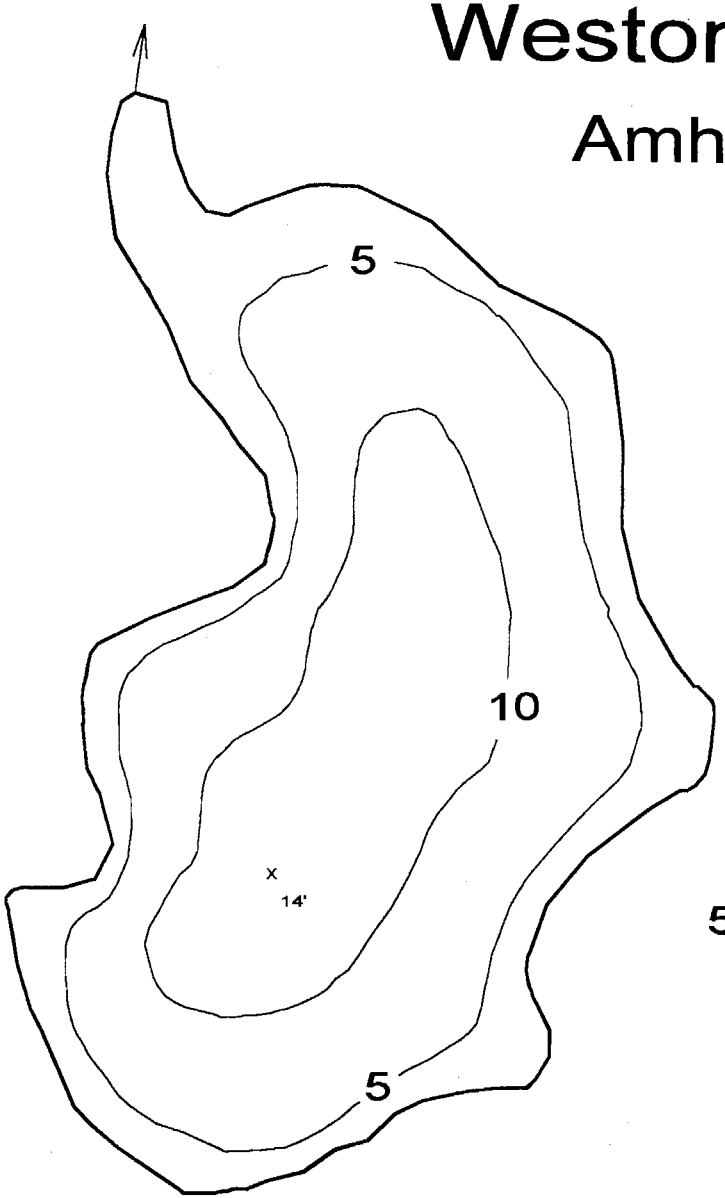
2. This is a small, relatively shallow, dark tea-colored eutrophic pond surrounded by woody wetlands. It had an abundance of algae and poor water clarity.

3. There was no public access and no development around the shore. It is an isolated pond that was accessed by walking up the outlet brook.

4. Both phytoplankton and zooplankton were numerous. The wholewater phytoplankton was dominated by Tabellaria (40%) and Oscillatoria (10%).

Weston Pond

Amherst



N

5 foot depth contours

0 0.1

Km

FIELD DATA SHEET

LAKE: WESTON POND
DATE: 07/16/93

TOWN: AMHERST
WEATHER: PARTLY SUNNY & WARM

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	25.5	8.0	97 %
	1.0	25.2	7.8	93 %
	2.0	22.8	1.7	19 %
	3.0	15.0	0.2	2 %
	3.5	13.5	0.2	2 %

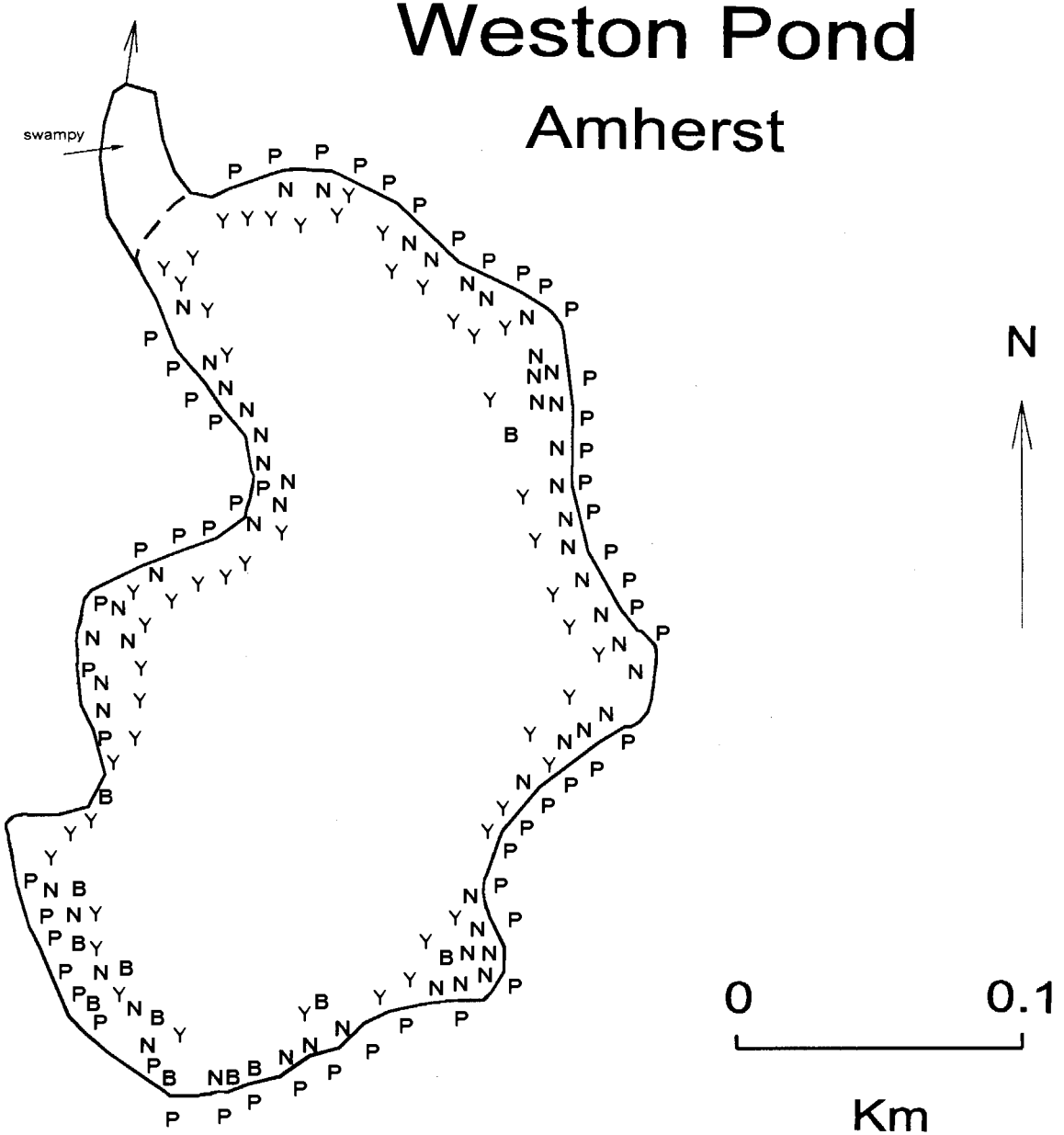
SECCHI DISK (m): 1.2
BOTTOM DEPTH (m): 4.0
TIME: 1210

*Dissolved oxygen values are in mg/L

COMMENTS: There was a substantial temperature difference from top to bottom (12°C) in only 3.5 meters of water. This suggests the pond is protected from wind mixing. The bottom dissolved oxygen depletion suggests a highly organic bottom and productive pond.

Weston Pond

Amherst



AQUATIC PLANT SURVEY

LAKE: WESTON POND TOWN: AMHERST DATE: 07/16/93

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Scattered
N	Nymphaea	White water lily	Scattered
Y	Nuphar	Yellow water lily	Scattered
B	Brasenia schreberi	Water shield	Sparse
U	Utricularia	Bladderwort	Sparse

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. This pond was surrounded by a primarily wooded wetland, containing plants such as cattails, alders and swamp maples. These plants are not listed or depicted on the map. Only plants in the water are depicted.

2. Bladderwort may have been more abundant along the pond bottom but were not observed because of poor water clarity.